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Effects of Attention-Boosting Exercises on the Academic Performance of Grade Two Pupils

Ginia C. Relente, MAEd
Graduate Student, Tomas Claudio Colleges, Morong, Rizal, Philippines
Teacher I, Binangonan Elementary School, Binangonan, Rizal Philippines

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Email of Corresponding Author: giniarelentegcr@gmail.com

Abstract

This study investigated the effects of attention-boosting exercises on the academic performance of Grade Two pupils in selected public elementary schools in the District of Binangonan during the School Year 2025–2026. The participating schools included Bilibiran, Binangonan, Calumpang, Casimiro A. Ynares Sr., Darangan, Doña Susana Madrigal, Libis, Libid, Lunsad, Mabuhay Homes 2000, Macamot, Mahabang Parang, Pilapila, and Tatala Elementary Schools.The respondents were the total population of 100 Grade Two teachers, described by age, sex, civil status, educational attainment, position, length of service, and in-service trainings attended. Using a researcher-made questionnaire-checklist and documentary analysis of pupils' First Quarter grades (School Form 9), the study examined the perceived impact of attention-boosting exercises on cognitive improvement, knowledge competency, skills competency, and transfer of learning. A descriptive research design was applied.Results showed that teachers perceived attention-boosting exercises to significantly enhance pupils' cognitive, knowledge, and skills competencies. Most respondents were female, aged 41–50 years, married, Teacher I holders, with a Bachelor's degree and 10–14 years of experience, having attended national-level trainings. Perceptions did not significantly differ by age, sex, educational attainment, position, or length of service, but civil status and in-service trainings influenced certain aspects. Pupils' academic performance was very satisfactory (mean = 87.66), with no significant relationship between teachers' perceptions and actual performance.The study recommends conducting targeted in-service trainings, incorporating attention-boosting exercises into lesson plans, applying short engaging activities to sustain focus, and exploring related variables in future studies.

Keywords: attention-boosting exercises, academic performance, Grade Two pupils, cognitive improvement, knowledge competency, skills competency, transfer of learning

1. Introduction

Education serves as a vital avenue for equipping individuals with knowledge, skills, techniques, and values that enable them to understand their responsibilities toward family, society, and the nation. It is a continuous process that molds individuals into better persons who can share their knowledge with others. In a competitive and rapidly changing world, education empowers people to solve problems, develop themselves, and contribute meaningfully to society.The 1987 Philippine Constitution, Article XIV, Section 1, emphasizes that:"The State shall protect and promote the right of all citizens to quality education at all levels and shall take appropriate steps to make such education accessible to all."This provision underscores the government's responsibility, through the Department of Education (DepEd), to ensure quality and accessible education for all learners. DepEd Order No. 10 s. 2024 on the MATATAG Curriculum further highlights the need for instructional planning, teaching strategies, learning resources, and assessment tools aligned with 21st-century learning outcomes.

In the primary years of schooling, attention is a critical cognitive skill supporting all areas of learning. However, young learners often struggle to maintain focus, particularly in classrooms where lessons are structured and fast-paced. Teachers report that distractions hinder pupils' learning, which can affect academic performance. To address this, attention-boosting exercises—such as short physical activities, mindfulness techniques, and concentration games—have been used to enhance focus, engagement, and cognitive readiness.Evertson (2020) emphasized that effective classroom management improves student engagement and learning outcomes. Clair (2020) highlighted standards for child-friendly schools that support holistic development. Muhammad et al. (2021) and Howard et al. (2020) underscored the role of motivation in academic performance. Bikila (2024) and Garcia et al. (2022) demonstrated that structured physical activity and active methodologies enhance attention and cognitive performance.Gubaton (2024) and Uyguangco (2020) examined strategies to increase student motivation and engagement. Elvina & Quirap (2024) analyzed motivational factors and academic performance. Pineda (2020) studied teaching strategies for slow learners, while Fajardo et al. (2023) and Mincera (2024) explored attention span and factors affecting focus in learners.

While existing studies highlight motivation, physical activity, and teaching strategies as factors influencing attention and engagement, few have specifically investigated attention-boosting exercises in Grade Two pupils within Philippine public elementary schools. Moreover, the direct effects of these exercises on cognitive, knowledge, and skills competencies remain underexplored, particularly in the context of structured classroom implementation and the MATATAG curriculum.

In view of these gaps, the present study aims to determine the effects of attention-boosting exercises on the academic performance of Grade Two pupils in selected public elementary schools in the District of Binangonan.

2. Materials and methods

2.1 Research Design

The study applied the descriptive method of research specifically, the survey design.

2.2 Research Setting

This study was conducted in selected public elementary schools in Binangona Sub- office, Division of Rizal. These schools include Bilibiran Elementary School, Binangonan Elementary School, Calumpang Elementary School, Casimiro A. Ynares Sr. Elementary School, Darangan Elementary School, Doña Susana Madrigal Elementary School, Libis Elementary School, Libid Elementary School, Lunsad Elementary School, Mabuhay Homes 2000 Elementary School, Macamot Elementary School, Mahabang Parang Elementary School, Pilapila Elementary School, and Tatala Elementary School.

2.3 Respondents

The respondents of the study were the total population of 100 grade two teachers in the said schools. They were described in terms of age, sex, civil status, educational attainment, position title, length of service, and in-service trainings attended.

2.4 Research Instruments

A researcher-made questionnaire-checklist was utilized to collect data for the study. Part I captured the personal profiles of the 100 Grade Two teachers, including age, sex, civil status, educational attainment, position title, length of service, and in-service trainings attended. Part II focused on the perceived effects of attention-boosting exercises on pupils' cognitive development, knowledge competency, skills competency, and transfer of learning, consisting of 40 items (10 per aspect) rated on a 5-point Likert scale from "Very Much Disagree" (1) to "Very Much Agree" (5). Documentary analysis was also conducted using pupils' first-quarter grades (School Form 9), categorized as Outstanding, Very Satisfactory, Satisfactory, Fairly Satisfactory, and Did Not Meet Expectations. The instrument underwent content validation by the thesis adviser, faculty lecturers, statistician, principal, master teachers, grade leader, and Dean of the Graduate Studies Program, whose feedback was incorporated to ensure its appropriateness for measuring the study variables.

2.5 Data Collection

The study followed the Gantt Chart of Activities in the conduct of the study. This includes the formulation of research problem up to the revision of the manuscript and submission of the final copy. The instrument was content validated by the thesis adviser, professorial lecturers, statistician, principal, master teachers, grade leader, and the Dean of the Graduate Studies Program. After the permission to conduct the study was obtained from the Office of the Schools Division Superintendent, the questionnaire-checklists was administered to the respondents through Google Form. The researcher was guided by the provisions of the Data Privacy Act.

After the retrieval, the data were encoded and processed using Statistical Package for Social Sciences (SPSS). Data processing and analysis was done. Based on the interpreted data, the summary of findings, conclusions and recommendations was made. The manuscript was subjected to anti-plagiarism test process at the Statistical Center. After considering all the suggestions given by the panel members, hardbound copies were submitted to the Office of the Dean of the Graduate Studies Program and other offices concerned.

2.6 Data Analysis

Data were analyzed using appropriate descriptive and inferential statistical techniques. Frequency, percentage, and rank distribution were employed to describe the profile of the respondents. The extent of the effects of attention-boosting exercises on pupils' academic performance across cognitive development, knowledge competency, skills competency, and transfer of learning was assessed using weighted mean. One-way analysis of variance (ANOVA) was applied to determine significant differences in perceived effects across respondents' profile variables. Pupils' academic performance, based on first-quarter grades, was analyzed using mean and standard deviation. Finally, Pearson correlation

analysis was conducted to examine the relationship between the perceived extent of attention-boosting exercises and the actual academic performance of Grade Two pupils.

2.7 Ethical Considerations

The study ensured the protection of the rights and welfare of all respondents. Participation was voluntary, and respondents were informed about the purpose of the study. Confidentiality and anonymity of all information provided were strictly maintained, and data were used solely for research purposes. The researcher ensured that the respondents were treated with respect and that no harm, whether physical, emotional, or psychological, would result from their participation in the study.

3. Results and Discussion

3.1. Profile of the Respondents in Terms of Selected Variables

The respondents of the study consisted of 100 Grade Two teachers from selected public elementary schools in the District of Binangonan. Analysis of their profile revealed that 33% were aged 41–50 years, followed by 31% aged 31–40 years, 23% aged 51 years and above, and 13% aged 21–30 years. The majority were female (94%), with males comprising only 6%. In terms of civil status, 73% were married, 21% single, 5% widowed, and 1% separated. Regarding position title, most teachers held the rank of Teacher I (67%), followed by Teacher III (19%), Teacher II (10%), Master Teacher I (3%), and Master Teacher II (1%). Educational attainment showed that 34% were Bachelor's Degree holders, 33% had MAED/MAT units, 29% were MAED/MAT graduates, and 4% had Ed.D./Ph.D. units. Teaching experience was highest among those with 10–14 years of service (25%), followed by 5–9 years (22%), 0–4 years (20%), 15–19 years (15%), and 20–24 years (8%). Finally, 26% of respondents attended in-service trainings at the national level, 25% at the district level, 23% at the division level, 15% at the regional level, and 11% at the school level. These data provide a comprehensive overview of the respondents' demographic and professional characteristics, which served as contextual variables in analyzing their perceptions of attention-boosting exercises and the academic performance of Grade Two pupils.

Table 1: *Profile of the Respondents*

Age	**f**	**%**	**R**
21 – 30 years old	13	13.0	4
31 - 40 years old	31	31.0	2
41 – 50 years old	33	33.0	1
51 years old and above	23	23.0	3
Total	**100**	**100.0**	
Sex	**f**	**%**	**R**
Male	6	6.0	2
Female	94	94.0	1
Total	**100**	**100.0**	
Civil Status	**f**	**%**	**R**
Single	21	21.0	2
Married	73	73.0	1
Widow /er	5	5.0	3
Separated	1	1.0	4
Total	**100**	**100.0**	
Position Title	**f**	**%**	**R**
Master Teacher II	1	1.0	5
Master Teacher I	3	3.0	4
Teacher III	19	19.0	3
Teacher II	10	10.0	4
Teacher I	67	67.0	1
Total	**100**	**100.0**	
Educational Attainment	**f**	**%**	**R**
with Ed. D. / Ph. D. Units	4	4.0	4
MAED / MAT Graduate	29	29.0	3
with MAED / MAT Units	33	33.0	2
Bachelor's Degree	34	34.0	1
Total	**100**	**100.0**	
Length of Service	**f**	**%**	**R**
0 - 4 years	20	20.0	3

5 - 9 years	22	22.0	2
10 - 14 years	25	25.0	1
15 - 19 years	15	15.0	4
20 - 24 years	8	8.0	5
Total	**100**	**100.0**	
In-Service Trainings Attended	**f**	**%**	**R**
National Level	26	26.0	1
Regional Level	15	15.0	4
Division Level	23	23.0	3
District Level	25	25.0	2
School Level	11	11.0	5
Total	**100**	**100.0**	

3.2. Extent of Effects of Attention-Boosting Exercises on the Academic Performance of the Grade Two Pupils as Perceived by the Respondents With Respect to Cognitive Improvement, Knowledge Competency, Skills Competency, and Transfer of Learning

The study revealed that respondents perceived attention-boosting exercises as highly effective in enhancing the academic performance of Grade Two pupils across multiple domains. The composite mean of 4.39 indicates a "Much Agree" (High Extent) level of effect. Among the aspects evaluated, cognitive improvement received the highest rating (4.43), followed by transfer of learning (4.42), skills competency (4.38), and knowledge competency (4.32). These findings suggest that attention-boosting exercises support pupils in maintaining focus, thinking critically, and applying learned concepts across different subjects. Engagement in such activities was associated with improved concentration, greater confidence, and better comprehension, contributing to stronger overall academic performance. The results imply that incorporating attention-boosting exercises into daily classroom routines can enhance pupils' cognitive, skill-based, and knowledge competencies, enabling them to perform more effectively in school and real-life contexts. These findings align with the principles of active learning theory, as highlighted by Saraçoğlu (2020), which emphasizes that activities stimulating student attention promote retention, comprehension, and critical thinking

Table 2:*Extent of Effects of Attention-Boosting Exercises on the Academic Performance of the Grade Two Pupils as Perceived by the Respondents With Respect to Cognitive Improvement, Knowledge Competency, Skills Competency, and Transfer of Learning*

Aspects	WX	Verbal Interpretation	Rank
Cognitive Improvement	4.43	Much Agree (High Extent)	1
Knowledge Competency	4.32	Much Agree (High Extent)	4
Skills Competency	4.38	Much Agree (High Extent)	3
Transfer of Learning	4.42	Much Agree (High Extent)	2
Composiste WX	**4.39**	**Much Agree (High Extent)**	

3.3. Significant Difference on the Extent of Effects of Attention-Boosting Exercises on the Academic Performance of Grade Two Pupils with Respect to the Cited Aspects in Terms of Their Profile

Analysis of variance (ANOVA) revealed that teachers' age, sex, educational attainment, position title, and length of service did not significantly influence their perceptions of the extent of effects of attention-boosting exercises on the academic performance of Grade Two pupils, as indicated by p-values greater than the .05 level of significance. This suggests that these personal characteristics do not affect how teachers perceive the effectiveness of such exercises. In contrast, significant differences were observed when respondents were grouped according to in-service trainings attended across all aspects, and civil status with respect to cognitive improvement and skills competency, with p-values below .05. These results indicate that while attention-boosting exercises are generally effective regardless of most teacher characteristics, professional development and personal experiences may shape the quality and application of these strategies. Teachers with more in-service trainings are likely better equipped with updated pedagogical techniques, enabling more effective implementation of attention-boosting activities to enhance pupils' cognitive and skill development. Similarly, civil status may influence teachers' perspectives and approaches, affecting how they engage learners' attention in the classroom. These findings align with Evertson (2020), who emphasized that professional development equips teachers with tools to design engaging, learner-centered activities that maintain student attention and motivation.

Furthermore, the Department of Education (2021) underscores the importance of continuous in-service training in helping educators adopt innovative teaching methods, thereby optimizing learners' focus and academic outcomes.

Table 3: *Significant Difference on the Extent of Effects of Attention-Boosting Exercises on the Academic Performance of Grade Two Pupils with Respect to the Cited Aspects in Terms of Their Profile*

Aspects/Profile	F-value	p-value	Ho	Verbal Interpretation
Age				
Cognitive Improvement	2.134	0.101	Accepted	Not Significant
Knowledge Competency	1.084	0.360	Accepted	Not Significant
Skills Competency	1.945	0.128	Accepted	Not Significant
Transfer of Learning	2.475	0.066	Accepted	Not Significant
Sex				
Cognitive Improvement	0.037	0.848	Accepted	Not Significant
Knowledge Competency	0.002	0.967	Accepted	Not Significant
Skills Competency	0.188	0.666	Accepted	Not Significant
Transfer of Learning	0.462	0.498	Accepted	Not Significant
Civil Status				
Cognitive Improvement	2.990	0.035	Rejected	Significant
Knowledge Competency	1.868	0.140	Accepted	Not Significant
Skills Competency	3.619	0.016	Rejected	Significant
Transfer of Learning	2.393	0.073	Accepted	Not Significant
Educational Attainment				
Cognitive Improvement	0.358	0.783	Accepted	Not Significant
Knowledge Competency	0.144	0.933	Accepted	Not Significant
Skills Competency	0.989	0.402	Accepted	Not Significant
Transfer of Learning	0.257	0.856	Accepted	Not Significant
Position Title				
Cognitive Improvement	1.755	0.144	Accepted	Not Significant
Knowledge Competency	1.352	0.256	Accepted	Not Significant
Skills Competency	1.297	0.277	Accepted	Not Significant
Transfer of Learning	0.986	0.419	Accepted	Not Significant
Length of Service				
Cognitive Improvement	1.524	0.190	Accepted	Not Significant
Knowledge Competency	1.483	0.203	Accepted	Not Significant
Skills Competency	2.159	0.065	Accepted	Not Significant
Transfer of Learning	1.120	0.355	Accepted	Not Significant
In-Service Trainings Attended				
Cognitive Improvement	3.419	0.012	Rejected	Significant
Knowledge Competency	2.878	0.027	Rejected	Significant
Skills Competency	3.050	0.021	Rejected	Significant
Transfer of Learning	4.618	0.002	Rejected	Significant

3.4. Level of Academic Performance of the Grade Two Pupils As Revealed In Their Average Grades

The academic performance of Grade Two pupils, as reflected in their average grades, shows that most achieved a Very Satisfactory level (42.0%), followed by Outstanding (25.0%), Satisfactory (23.0%), and Fairly Satisfactory (10.0%), with a mean score of 87.66 and a standard deviation of 5.213, indicating moderate variability. These results suggest that current teaching methods and learning activities are generally effective in promoting engagement and comprehension, though some pupils require additional support. The findings highlight the importance of differentiated instruction and the integration of strategies such as attention-boosting exercises to enhance focus, cognitive readiness, and academic performance. Consistent with Boström and Bostedt (2020), motivation and engagement play a critical role in learning outcomes, and attention-boosting exercises can sustain interest, reduce learning fatigue, and improve performance, emphasizing the need for continued use of evidence-based strategies alongside targeted interventions for pupils who need further academic guidance

Table 4. *Level of Academic Performance of the Grade Two Pupils As Revealed In Their Average Grades*

Grade	Verbal Interpretation	Frequency	Percent	Rank
90 and above	Outstanding	25	25.0	2
85 – 89	Very Satisfactory	42	42.0	1
80 – 84	Satisfactory	23	23.0	3
75 – 79	Fairly Satisfactory	10	10.0	4
Below 75	Did Not Meet Expectation	-	-	-
Total		**100**	**100.0**	
Highest Grade = 94		Mean = 87.66 (VS)		
Lowest Grade = 77		Standard Dev. = 5.213		

3.5. Significant Relationship Between the Perceived Extent of Effects of Attention-Boosting Exercises and the Level of Academic Performance of the Grade Two Pupils

The results indicate that the perceived extent of attention-boosting exercises—across cognitive improvement, knowledge competency, skills competency, and transfer of learning—does not have a significant relationship with the actual academic performance of Grade Two pupils, as all p-values exceeded the 0.05 level of significance. This suggests that while teachers view these exercises as beneficial for enhancing focus, engagement, and classroom participation, such perceptions do not directly predict pupils' grades. The findings imply that academic performance is influenced by multiple factors beyond classroom exercises, including individual learning styles, home environment, study habits, and intrinsic motivation. These results align with Davidovitch and Dorot (2023), who emphasized that student achievement is a multifaceted outcome shaped by both internal cognitive and motivational factors as well as external social and environmental conditions.

Table 5: *Significant Relationship Between the Perceived Extent of Effects of Attention-Boosting Exercises and the Level of Academic Performance of the Grade Two Pupils*

Aspects	r coefficient	p-value	Null Hypothesis	Verbal Interpretation
Cognitive Improvement	.081	.431	Accepted	Not Significant
Knowledge Competency	.077	.314	Accepted	Not Significant
Skills Competency	.111	.174	Accepted	Not Significant
Transfer of Learning	.112	.143	Accepted	Not Significant

4. Conclusion & Recommendations

The study concluded that teachers' perceptions of the effects of attention-boosting exercises on grade two pupils' academic performance—covering cognitive improvement, knowledge competency, skills competency, and learning transfer—are generally not influenced by their age, sex, educational attainment, position, or length of service. However, civil status and the number of in-service trainings attended were found to have some influence. Moreover, while teachers perceive these exercises as beneficial for engagement and focus, there is no direct correlation between the exercises and pupils' actual academic performance, suggesting that student achievement is affected by multiple factors beyond classroom strategies.

Based on these findings, it is recommended that school administrators organize targeted in-service trainings on attention-boosting techniques, classroom management, and cognitive development to equip teachers with effective pedagogical strategies. Teachers should integrate short, engaging activities—such as mindfulness breaks, focus games, or movement-based tasks—into lesson plans to maintain pupils' attention and enhance learning outcomes. Experienced

teachers who have attended relevant trainings may serve as mentors to colleagues, fostering the sharing of best practices. Regular evaluation of attention-boosting strategies in the classroom is encouraged to monitor their effectiveness, while flexible training opportunities should accommodate teachers' schedules and contexts. Finally, similar studies exploring other variables or contexts are recommended to further understand the impact of attention-focused strategies on pupil learning.

Compliance with ethical standards

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